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Natural Resources Defense Council Staff Blog

Amy Mall's Blog

New report: Expert confirms EPA finding that fracking linked to Wyoming ground water contamination

Posted May 1, 2012 in Health and the Environment

An independent scientist has confirmed that fracking has clearly contaminated a drinking water source east of the town of Pavillion, Wyoming, supporting the findings in a draft EPA report published in December.

This is not only important news for residents of the small town with contaminated water— but it has national significance as well. While oil and gas corporations enjoy exemptions from critical protective environmental provisions in the Safe Drinking Water Act and Clean Water Act, they have continued to publicly claim there has never been any proof that fracking has contaminated drinking water--despite reports of suspected cases from around the country.

The reason the oil and gas industry has been able to get away with saying that to date is that there has never been sufficient investigation to determine whether or not fracking is to blame. And industry has paid millions of dollars in legal settlements to Americans across the country, silencing them with nondisclosure agreements so that companies can continue to publicly deny responsibility for problems.

So EPA's findings in December marked some of the first official evidence that fracking is a threat to drinking water (Bainbridge, Ohio is another spot), and today's expert report backs the agency up.

NRDC, the Wyoming Outdoor Council, Sierra Club and the Oil and Gas Accountability Project commissioned independent hydrologist Tom Myers to review EPA's draft report, and are officially submitting his findings to the U.S. EPA as technical comments.

Residents of the Pavillion area have been complaining about poisoned drinking water and serious health symptoms they believe are related to fracking and, in 2009, EPA detected contamination in 11 drinking water wells in this ranching community. The contaminants included toxic chemicals that are used in the fracking process and the draft findings from the EPA investigation into the cause, released in December, pointed the finger at nearby fracking.

My colleague Briana Mordick and I have been blogging about Pavillion and the investigation. Briana outlined the EPA's findings, including that ground water near Pavillion has been contaminated by chemicals used in hydraulic fracturing, and that those chemicals most likely reached groundwater through subsurface pathways.

The EPA is accepting public comment on its draft investigation through October, 2012. After the public comment period, a peer review of the draft report will be led by a panel of independent scientists.

Today, NRDC and our partner groups submitted a comment letter, accompanied by an expert technical review conducted by independent consulting hydrologist Tom Myers. Among Dr. Myers's findings:

> Chemical contaminants found in Pavillion domestic water wells and EPA's monitoring wells have been linked to either the gas well production or hydraulic fracturing process.
>
> The EPA's investigation is scientifically sound and demonstrates in a scientifically reliable way that chemical contaminants from the gas production zone reached the geologic formations between the gas production wells and the domestic water wells in the area.
>
> There are higher than background concentration levels of potassium and chloride that support the conclusion that the source of those chemicals is hydraulic fracturing fluid emanating from the gas production zone.
>
> Several synthetic organic compounds found in the EPA monitoring wells are apparently linked to hydraulic fracturing fluids, as there is no scientifically viable alternative explanation.
>
> The EPA report demonstrates that it is the gas production process itself that has caused contamination in the domestic water wells of

the Pavillion area.

EPA's monitor wells were carefully constructed and sampled using proper purging methods and could not have affected the existing groundwater chemistry.

The bottom line is that the EPA investigation is scientifically sound, and its conclusions critically important for helping scientists and the public to understand the threats to drinking water posed by fracking.

These findings only serve to underscore why we need strong rules on the books that safeguard the American public from drinking water threats from fracking--including closing the Halliburton loophole in the Safe Drinking Water Act that allows the oil and gas industry to cut corners and put our water supplies at risk. We look forward to the final EPA report after continued investigation and peer review.

Comments

BS — May 1 2012 12:48 PM

Please keep in mind that this is an example of where fracking occurred at very shallow depths and is not at all an indication of fracking being dangerous at any other location except this one.

Most fracking is done a mile or more below groundwater.

Also, this report, while it may wind up being confirmed, is still being reviewed.

Colt Beddoes — May 1 2012 03:17 PM

The results from these scientific tests should hopefully get all of the people around oil and gas fracking fields to pay more attention to what is going on for the well being of everyone. There is also more contamination than just the fracking which happens when drilling wells and also the air pollution from production side after wells are drilled.

Ed Murray — May 1 2012 05:23 PM

Drilling is done below the water table?

I live in Pennsylvania and I don't think that is the case where the water "BURNS":(

BS — May 2 2012 09:06 AM

Ed,

Drilling is done at the surface and goes down miles below the surface. So the drilling crosses through the water table. The fracking generally occurs at least a mile or two below the water table, as I said. Drillers install steel pipes encased in concrete which makes it virtually impossible for gas produced from the well to leak into the water table.

Drilling and fracking are not the same thing.

With respect to your claims about the water in Penssylvania burning, it's well documented that natural gas has been present in water wells since before drilling even began. Natural gas has always naturally seeped upward to the surface.

Drilling for and producing natural gas would, in fact, reduce the amount of natural seepage. A better example of this would be the Gulf of Mexico where hundreds of millions of gallons of oil seep naturally into the Gulf every year. By producing oil in the gulf, oil is depleted and pressures decrease. This has actually reduced the amount of oil naturally seeping into the Gulf and will continue to do so.

Amy Mall — May 2 2012 10:11 AM

Some wells are very shallow, and some are deeper. It will vary from place to place. Some fracking takes place in aquifers. It is also important to note that blow-outs and other problems can occur during frack operations at any point in a well -- for example at a shallow depth in a deep well.

While some methane is naturally occurring in aquifers, state regulators in several states have found that oil and gas operations have also caused methane contamination of aquifers.

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